

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11)

EP 1 100 056 A2

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
16.05.2001 Bulletin 2001/20

(51) Int. Cl. 7: **G07F 7/08, G07F 19/00**

(21) Application number: **00123440.0**

(22) Date of filing: **03.11.2000**

(84) Designated Contracting States:
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE TR**
Designated Extension States:
AL LT LV MK RO SI

(72) Inventor: **Colli, Roberto**
20154 Milano (IT)

(74) Representative: **Modiano, Guido, Dr.-Ing. et al**
Modiano & Associati SpA
Via Meravigli, 16
20123 Milano (IT)

(30) Priority: **11.11.1999 IT MI992363**

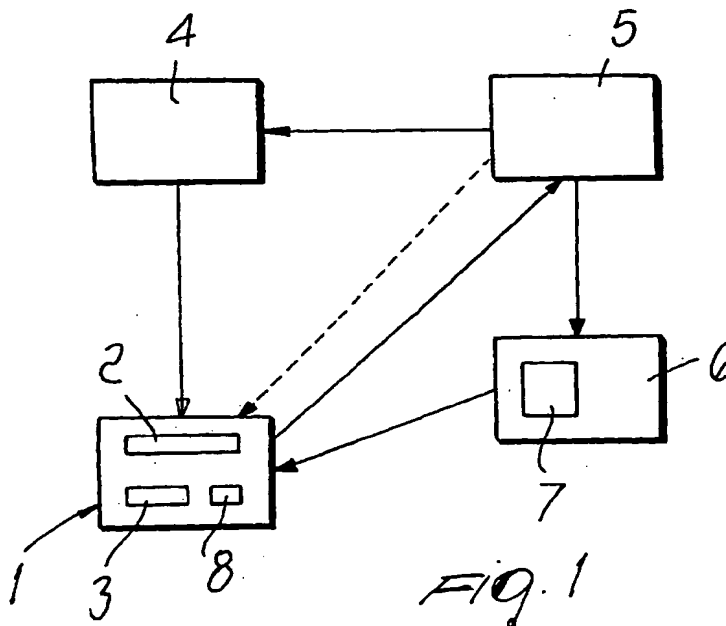
(71) Applicant: **Threecodex S.r.l.**
20135 Milano (IT)

(54) Online payment transaction method using a prepaid card, and associated card

(57) An online payment transaction method using a card, comprising the steps of:

preparing a prepaid card meant to be purchased by a user;
the prepaid card containing an activation code and at least one secret code;
activating the prepaid card on the part of the user by transmitting the at least one secret code, together with a password, to an operator of the prepaid

card;
when the user makes a purchase online, receiving, from a retailer from which the user wishes to make the purchase, a unique reference code which identifies the retailer, and sending the reference code to the card operator together with the secret code and the password;
the card operator enabling the purchase at the retailer.



EP 1 100 056 A2

Description

[0001] The present invention relates to an online payment transaction method using a prepaid card and to the associated card to be used in the method.

[0002] It is known that the extensive development of telecommunications networks, such as for example the Internet, has allowed, and in the future will allow to an ever-increasing extent, to purchase goods and services directly online, simply by filling-in an appropriate form which is displayed on the user's screen and in which the user, after selecting the goods or service to purchase, must specify his data and his credit card number in order to be able to make the purchase.

[0003] However, the need to enter the credit card number and to send it as data over the network causes considerable concern in users, who do not trust the security of the transmission of the data item (credit card number), which if acquired fraudulently would allow third parties to freely use online the credit card of the legitimate owner.

[0004] It should also be noted that in most cases the privacy of the user who makes online purchases is not maintained, since the statements of account provided by credit card operators following purchases made by a customer are obviously not anonymous, and therefore if a user makes a purchase that he does not want others to know about, the arrival of a statement of account thwarts his hopes of secrecy.

[0005] Moreover, the fact should be noted that many users of computer networks such as the Internet have an age whereby they do not own a credit card and therefore would have to ask for permission from parents or relatives who own a credit card in order to be able to make purchases.

[0006] Moreover, as mentioned, notwithstanding the ever-increasing diffusion of credit cards, their online use always causes user concern, and this clearly does not help the growth of e-commerce, which thanks to networks such as the Internet may really experience explosive growth and involve an ever larger number of companies.

[0007] The aim of the present invention is to provide an online payment transaction method using a card, wherein the transaction is substantially secure and in any case the damage that the user might incur is modest.

[0008] Within this aim, an object of the present invention is to provide an online payment transaction method using a card in which access to use of the card is controlled by a double security system, so as to ensure that only the authorized user is using the card involved.

[0009] Another object of the present invention is to provide an online payment transaction method using a card which allows substantially to eliminate credit card operators from the process, allowing savings for both users and retailers.

[0010] Another object of the present invention is to

provide a card for use with the above-cited method which is simple to provide.

[0011] Another object of the present invention is to provide an online payment transaction method using a card which is highly reliable, relatively simple and at competitive costs.

[0012] This aim and these and other objects which will become better apparent hereinafter are achieved by an online payment transaction method using a card, characterized in that it comprises the steps of:

preparing a prepaid card meant to be purchased by a user;
said prepaid card containing an activation code and at least one secret code;
activating said prepaid card on the part of the user by transmitting said at least one secret code, together with a password, to an operator of said prepaid card;
when said user makes a purchase online, receiving, from a retailer from which said user wishes to make said purchase, a unique reference code which identifies said retailer, and sending said reference code to said card operator together with said secret code and said password;
said card operator enabling the purchase at said retailer.

[0013] Further characteristics and advantages of the present invention will become better apparent from the following detailed description of a preferred but not exclusive embodiment of the method according to the invention, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

Figure 1 is a block diagram which shows in a simplified manner the steps of the method according to the present invention; and
Figure 2 is a schematic view of an embodiment of a card which can be used with the method according to the present invention.

[0014] With reference to the above-cited figures, the method according to the present invention uses a card, designated by the reference numeral 1, of the prepaid type, i.e., a card which the user purchases for a preset amount, which is the credit of the user available to make online purchases.

[0015] The card 1 is conveniently provided with at least one activation code 2, for example a magnetic code, which is applied to said card and is adapted to validate the card when it is distributed to the user who purchases it.

[0016] Moreover, on the card 1 there is at least one code 3 which is secret and is initially covered and therefore not legible.

[0017] The code 3 is read by the user, if he wishes to make the first purchase, by scratching off or otherwise

removing the portion that covers the code 3, in order to allow to view the code and enter it during a payment transaction performed as a consequence of an online purchase.

[0018] The method according to the invention therefore entails a first step in which the card 1 is delivered to a user, for a corresponding prepaid amount which the user pays to an operator 5 of the service, which can be the same organization that distributes the card or a separate distributor 4.

[0019] The card 1 is firstly activated by passing it through a reader which detects the activation code 2 that is present on the card and thus allows the user to use the card.

[0020] Conveniently, the user must in turn activate the card at the operator 5 and this "personalized" activation occurs by transmitting to the operator 5 the secret code 3 together with a password which allows to ensure that the person making a purchase with the card 1 is actually the owner of the card.

[0021] The initial activation of the card 1 at the operator 5 creates a sort of "account" of the user at the operator 5, the balance of said account being equal to the cost of the prepaid card that the user purchased.

[0022] When the user wishes to make a purchase at a retailer 6 of goods or services, the retailer himself transmits to the user, once said user has chosen the goods or service, a reference number 7 which is specific to the retailer 6 and is transmitted by the user to the operator 5 of the service together with his secret number 3, obviously after entering the previously described password.

[0023] The retailer 6 further transmits a reservation number to the user, who in turn must transmit it to the operator 5.

[0024] The password is designated by the reference numeral 8 in Figure 1 and Figure 2 by way of example, but this is of course only a graphical example, since the password must be known only by the owner of the card 1 and therefore is in no way written on the card.

[0025] In practice, the user can activate the service only if he sends the password 8, together with the secret code 3, to the card operator 5 together with the reference number sent by the retailer 6, which identifies that particular retailer.

[0026] At this point the transaction is performed and the operator 5 assigns the amount that the user must pay directly to the retailer 6, also transmitting the reservation number to the retailer.

[0027] In this manner it is possible to perform an online payment transaction without resorting to a credit card and most of all without having to resort to entering the credit card number and sending it online.

[0028] The only number that is entered by the user is in fact the secret code that is present on the card 1, which however, without association with the corresponding password chosen by the user, has no effect on the virtual "account" that the user has opened at the

card operator 5.

[0029] Moreover, since no personal data, such as name, surname and address, are sent to the card operator 5, and since the operator 5 sends no "statement of account" to the user, full anonymity of the operations performed by the user is guaranteed, thus ensuring his confidentiality.

[0030] The above-described method is particularly useful for online purchases, for example on the Internet, and for all users who for any reason do not own a credit card or in any case do not trust sending their credit card number over a computer network to purchase goods or a service.

[0031] Moreover, the above-described method allows to avoid direct involvement of credit card operators in the transaction, since the card can be controlled by an operator who is not tied to conventional credit card operators and therefore the commissions can be reduced, since there are no running costs such as statements of account to be sent to customers and the like.

[0032] In practice it has been observed that the method according to the invention fully achieves the intended aim and objects, since it allows to make a transaction by means of a prepaid card online without having to report a credit card number or the like.

[0033] Therefore, in the worst case in which the secret code number and the keyword both become known to a fraudulent user, the amount that the user would lose would be at the most equal to the balance of the prepaid card that he purchased.

[0034] This of course does not occur with a conventional credit card.

[0035] Moreover, if the user purchases a second prepaid card before the first one is fully used, the credit remaining from the first prepaid card can be transferred to the second prepaid card, and so forth. In this manner, the user can create for himself a "virtual account" with the card operator.

[0036] The method thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the inventive concept; all the details may furthermore be replaced with other technically equivalent elements.

[0037] The disclosures in Italian Patent Application No. MI99A002363 from which this application claims priority are incorporated herein by reference.

[0038] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly, such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

1. An online payment transaction method using a

card, characterized in that it comprises the steps of:

es to know the secret code in order to make a purchase.

- preparing a prepaid card meant to be purchased by a user;
 said prepaid card containing at least one activation code and at least one secret code;
 activating said prepaid card on the part of the user by transmitting said at least one secret code, together with a password, to an operator of said prepaid card;
 when said user makes a purchase online, receiving, from a retailer from which said user wishes to make said purchase, a unique reference code which identifies said retailer, and sending said reference code to said card operator together with said secret code and said password;
 said card operator enabling the purchase at said retailer.

5
10
15
20
- 2. The method according to claim 1, comprising the step of firstly activating said prepaid card reading said activation code, said first activation being performed by the card operator just before said prepaid card is delivered to the user.

25
- 3. The method according to claim 1, characterized in that said step of transmitting to said card operator said secret code together with said password consists in opening, at said card operator, a virtual account whose balance is equal to the balance of said prepaid card.

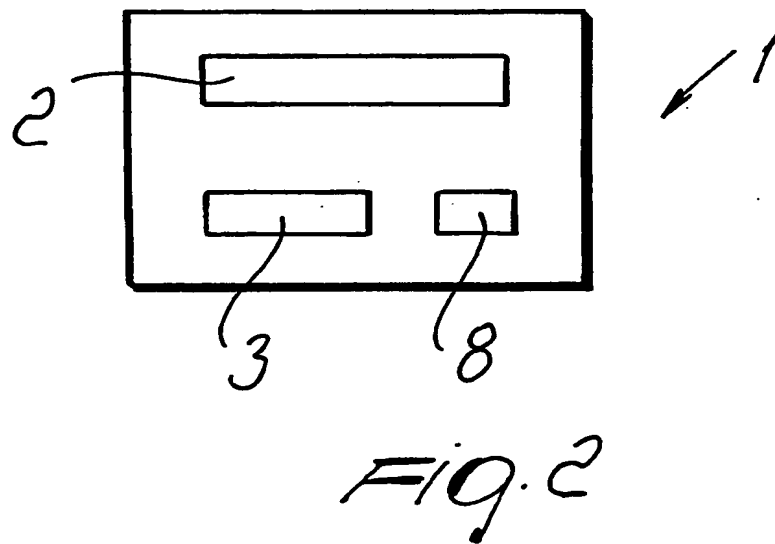
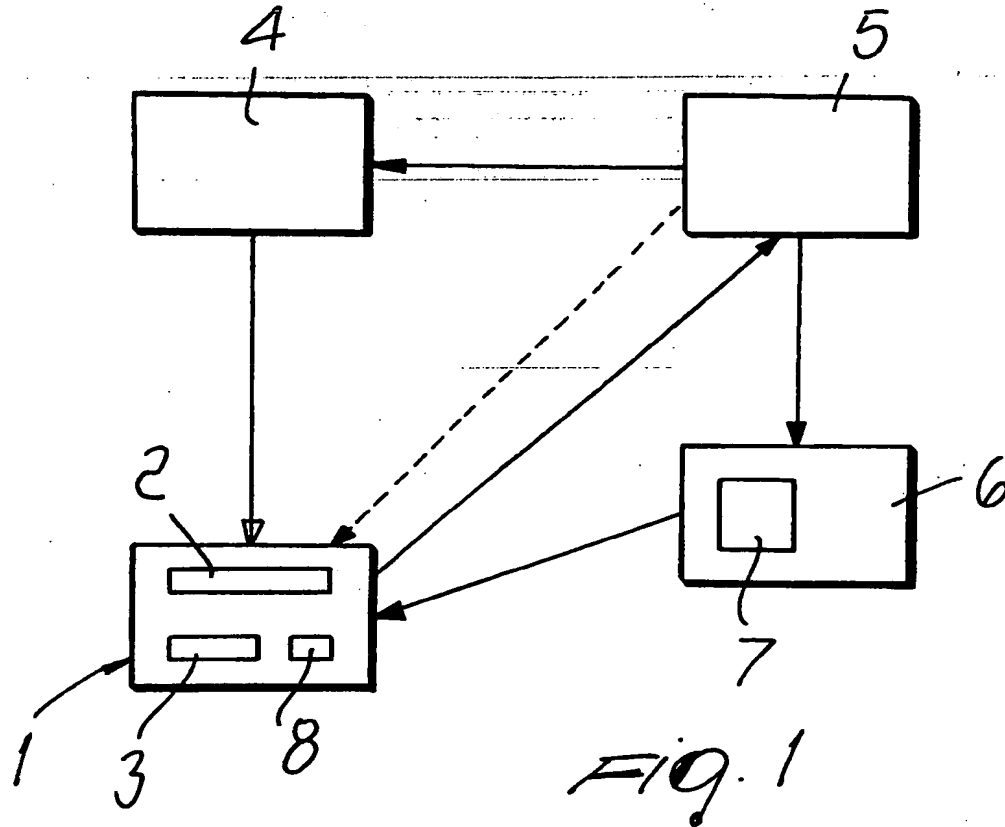
30
- 4. The method according to claim 1, characterized in that said step of sending said password to said card operator, together with said secret code, must be performed at each purchase that the user wishes to make.

35
- 5. The method according to claim 1, characterized in that said secret code that is present on said prepaid card is not legible when said card is being distributed to said user.

40
- 6. A prepaid card for online payment transactions, characterized in that it comprises at least one activation code which allows to activate said card and at least one secret code which allows to activate a payment transaction at a card operator in association with the transmission of a password.

45
50
- 7. The card according to claim 6, characterized in that said secret code is not legible when said card is being distributed to said user.

55
- 8. The card according to claim 6, characterized in that said secret code is covered by a covering element which is adapted to be removed when the user wish-



This Page Blank (uspto)

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11)

EP 1 100 056 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
03.07.2002 Bulletin 2002/27

(51) Int Cl. 7: G07F 7/08, G07F 19/00

(43) Date of publication A2:
16.05.2001 Bulletin 2001/20

(21) Application number: 00123440.0

(22) Date of filing: 03.11.2000

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE TR
Designated Extension States:
AL LT LV MK RO SI

(72) Inventor: Colli, Roberto
20154 Milano (IT)

(74) Representative: Modiano, Guido, Dr.-Ing. et al
Modiano & Associati SpA
Via Meravigli, 16
20123 Milano (IT)

(30) Priority: 11.11.1999 IT MI992363

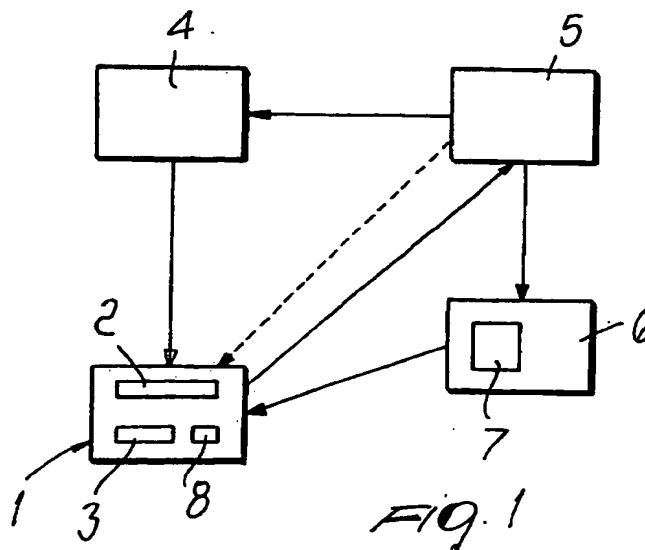
(71) Applicant: Threecodex S.r.l.
20135 Milano (IT)

(54) Online payment transaction method using a prepaid card, and associated card

(57) An online payment transaction method using a card, comprising the steps of:

preparing a prepaid card meant to be purchased by a user;
the prepaid card containing an activation code and at least one secret code;
activating the prepaid card on the part of the user by transmitting the at least one secret code, together with a password, to an operator of the prepaid

card;
when the user makes a purchase online, receiving, from a retailer from which the user wishes to make the purchase, a unique reference code which identifies the retailer, and sending the reference code to the card operator together with the secret code and the password;
the card operator enabling the purchase at the retailer.



EP 1 100 056 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 00 12 3440

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	US 5 577 109 A (STIMSON CHARLES J ET AL) 19 November 1996 (1996-11-19) * column 3, line 55 - column 5, line 6 * * column 6, line 66 - column 7, line 11 * * abstract; figures *	6-8	607F7/08 607F19/00
A		1-5	
Y	FR 2 747 962 A (ITTAN AARON) 31 October 1997 (1997-10-31) * abstract; figure *	6-8	
A		1-5	
Y	WO 96 38801 A (TASKETT JOHN M ;AMERICAN EXPRESS TRS (US)) 5 December 1996 (1996-12-05) * page 2, paragraph 2 * * figure 2 * * abstract * * page 11, paragraph 1 *	6-8	
A		1-5	
A	DE 197 16 068 A (GIESECKE & DEVRIENT GMBH) 22 October 1998 (1998-10-22) * abstract; figures 1-4 * * column 8, line 20 - line 25 * * column 7, line 13 - column 7, line 18 *	1-8	TECHNICAL FIELDS SEARCHED (Int.Cl.7) 607F 606F
A	WO 99 33033 A (DAVIS VIRGIL M ;ROTH JANET R (US); VISA INT SERVICE ASS (US)) 1 July 1999 (1999-07-01) * abstract; figures 1-3,7,8 * * page 8, last paragraph * * page 10, paragraph 2 - page 11, paragraph 1 *	1-8	
-/--			
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 30 April 2002	Examiner Aguilar, J
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, not published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03.92 (P04C01)



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 00 12 3440

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	EP 0 921 487 A (M P TECHNOLOGY INC ;NIPPON TELEGRAPH & TELEPHONE (JP)) 9 June 1999 (1999-06-09) * the whole document *	1-8	
A	WO 99 49404 A (TELCORDIA TECH INC) 30 September 1999 (1999-09-30) * the whole document *	1-8	
A	US 5 673 309 A (WOYNOSKI EUGENE A ET AL) 30 September 1997 (1997-09-30) * the whole document *	1-8	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
Place of search MUNICH		Date of completion of the search 30 April 2002	Examiner Aguilar, J
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

EPO FORM 1503 01.82 (P04001)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 00 12 3440

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

30-04-2002

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5577109	A	19-11-1996	US 5511114 A	23-04-1996
			AU 2770795 A	04-01-1996
			CA 2192310 A1	14-12-1995
			WO 9534161 A1	14-12-1995
			US 5721768 A	24-02-1998
FR 2747962	A	31-10-1997	FR 2747962 A1	31-10-1997
WO 9638801	A	05-12-1996	AT 185208 T	15-10-1999
			AU 695518 B2	13-08-1998
			AU 6151896 A	18-12-1996
			CA 2222749 A1	05-12-1996
			DE 69604495 D1	04-11-1999
			DE 69604495 T2	04-05-2000
			DK 836727 T3	27-12-1999
			EP 0836727 A1	22-04-1998
			ES 2139359 T3	01-02-2000
			GR 3032178 T3	27-04-2000
			HK 1010256 A1	16-06-2000
			JP 11506558 T	08-06-1999
			WO 9638801 A1	05-12-1996
DE 19716068	A	22-10-1998	DE 19716068 A1	22-10-1998
			AT 213856 T	15-03-2002
			AU 7642198 A	13-11-1998
			DE 59803197 D1	04-04-2002
			WO 9848388 A2	29-10-1998
			EP 0976113 A2	02-02-2000
WO 9933033	A	01-07-1999	AU 1932499 A	12-07-1999
			CA 2315656 A1	01-07-1999
			EP 1040456 A2	04-10-2000
			WO 9933033 A2	01-07-1999
			US 6298336 B1	02-10-2001
EP 0921487	A	09-06-1999	EP 0921487 A2	09-06-1999
			JP 11316729 A	16-11-1999
			US 6343284 B1	29-01-2002
WO 9949404	A	30-09-1999	AU 3108199 A	18-10-1999
			CA 2324114 A1	30-09-1999
			CN 1298526 T	06-06-2001
			EP 1064611 A1	03-01-2001
			JP 2002508547 T	19-03-2002
			WO 9949404 A1	30-09-1999

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 00 12-3440

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

30-04-2002

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5673309 A	30-09-1997	AU 7738196 A	11-06-1997
		WO 9719549 A1	29-05-1997
		US 6370240 B1	09-04-2002

EPO FORM P0139

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

Page Blank (uspto)